CLAIMS

1. A method of adjusting a treatment machine in which a transporting chain for transporting objects to be treated is guided in loops through at least one treatment station in a machine housing and driven at least at two locations by drives which in a normal operation are synchronized and adjusted relative to one another so that the transporting chain in its guides is neither tightly pulled nor compressed, the method comprising the steps of:

a. Selecting two drives which follow one another in a forward direction of the transporting chain;

b. asynchronously driving the selected drives, so that a chain portion located therebetween is tightly pulled or compressed by producing a length difference, and measuring a parameter which is dependent from a drive moment of one or both selected drives;

c. when the parameter reaches or exceeds a fixed value, operating the drives asynchronously for reducing the previously produced length difference by a predetermined amount;

d. Subsequently maintaining the adjusted relative position of the both drives relative to one another, with asynchronous operation of the drives; and

e. using the preceding steps for further drives, until chain lengths in all chain portions to be adjusted are adjusted.

2. A method as defined in claim 1; and further comprising the step of operating synchronously a drive arranged in a drive direction between a chain portion to be adjusted and a compensating portion of the transporting chain for receiving an excessive chain length, together with a selected drive and/or all remaining drives together with the other selected drive.

3. A method as defined in claim 1; and further comprising providing a parameter which is independent from the drive moment, for each chain portions to be adjusted.

4. A method as defined in claim 1; and further comprising providing a special predetermined amount for a reduction of the previously produced length difference for each chain portion to be adjusted.

5. A method as defined in claim 1; and further comprising, first pulling tight the chain portion adjusted in the steps b and c until reaching a first parameter, and then with registering the chain lengths which is required for it, compressing the chain portion until reaching a second parameter value or vice versa; and providing an amount of subsequent adjusting steps in dependence on the registered chain length.

6. A method as defined in claim 1; and further comprising electrically controlling the drives; and performing the method automatically by a programmable microprocessor.

7. A method as defined in claim 6; and further comprising providing the drives with rotary sensors for determination of their relative

angular positions; storing the angular positions; and performing the synchronization of an electrical path by controlling the drives.

8. A method as defined in claim 1; and further comprising providing the drives with electric motors; and measuring current consumption of the electric motors as parameters which are dependent from drive moments.

9. A method as defined in claim 1; and further comprising forming the drives as electrical drives; fixing a first electrical drive arranged in the forward direction of said transporting chain after a compensation portion and before a chain portion to be adjusted; operating a subsequently arranged second electrical drive synchronously with all subsequent electrical drives in the forward direction until its current consumption exceeds a predetermined value; then stopping the second drive together with all subsequent drives, turning them back by predetermined rotary angle opposite to the forward direction, and subsequently stopping; continuing the method with a third and subsequent drives correspondingly until a last chain portion arranged before the compensation portion is adjusted.

10. A method as defined in claim 1; and further comprising forming the drives as electrical drives; fixing a first electrical drive arranged in the forward direction of said transporting chain after a compensation portion and before a chain portion to be adjusted; operating a subsequently arranged second electrical drive in the forward direction until its current consumption exceeds a predetermined value, stopping the second drive together with subsequent drives and turning the first drive by a predetermined rotary angle in the forward direction, and subsequently fixing it together with said second drive; continuing the method with a third and all subsequent drives until a last chain portion arranged before the compensation portion is adjusted; and operating the chain portions adjusted previously and the drives arranged after synchronously or fixing them together.

11. A method as defined in claim 1; and further comprising measuring chain length differences occurring during each adjustment; storing the measured chain length differences; and evaluating their sum as an indicator for a total chain length and/or chain wear.

12. A method as defined in claim 11; and further comprising measuring a length of a chain sagging in a compensation portion and evaluating it as an indicator for a total chain length and/or chain wear.

13. A method as defined in claim 1; and further comprising using a programmable control for performing the adjustment.